Work Order ID 115529

115529

Thursday, April 03, 2014 7:51:03 AM

Item ID: D2423 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID:

Item Name: Lug Extrusion 336 **Stop** *NS2*

Start Date: 4/3/2014 **Start Qty:** 320.00 ~~*320*~~ **Cust Item ID:**

Required Date: 5/2/2014 **Req'd Qty:** 320.00 ~~*320*~~ **Customer:**

Reference:

Approvals: **Process Plan:** CL **Date:** 14/04/03 **Tooling:** _____ **Date:** _____ **Run Start** *NR1*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D2423	Rev B1								
100		0.00							
100	PURCHASING								
Purchasing	**Memo**	0.00							
Purchasing	Issue P/O: 23637 Manufacture as per Dwg Possible Supplier: SIGNATURE ALUMINUM Material release note is required ***EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.*** ***MUST BE WELL PACKAGE, IF NOT IT WILL BE REFUSE***								
110	Receive & Inspect for Damage & Mat'l Certs	0.00							
110									
Packaging	**Memo**	0.00							
Packaging									

336 CL 14/04/03 ~~320~~

14/5/16 376

P/O →

DQA: _____ Date: 14/06/03

QA Closed: _____ Date:

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

Work Order update only [X]

Work Order: D2423

Part No. 115529R

NCR No. _____

DISPOSITION

Rework []
Scrap []
Use-as-is []
Suspected Unapproved []

AGAINST DEPARTMENT/PROCESS

Skid-tube [] Crosstube [] Water Jet [] Engineering []
Machining [] Small Fab [] Prod. Eng. Coor. [] Quality []
Thermoforming [] Finishing [] Rec/Store/Packaging [] Other []
Large Fab [] Composite [] Supplier []

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	[]							DAS 27 9-89 14/5/15		14/05/06
Doc/Data	[]									
Equip/Tooling	[]									
Handling/Pre	[]									
Material	[]				@ change ship to QC18 →					
Operator	[]	14/05/06	# 120							
Offset/Setup	[]									
Process	[]									
Supplier	[]									
Training	[]									
Transport	[]									
Unapproved	[]									

FAULT CATEGORY

Landing Gear

- [] Bending
- [] Centre Not Concentric
- [] Cracks
- [] Crimp/Kink/Ripple/Wave
- [] Cuffs
- [] Crushing
- [] Heat Treat
- [] Inspection Strip in Tube
- [] Marks/Chatter
- [] Turning Sequence
- [] Wave/Twist in Tube

General

- [] Bend
- [] BOM/Route
- [] Broken/Damage/Defect
- [] Burrs
- [] Contamination
- [] Countersink
- [] Cut Too Short
- [] Drawing
- [] Drill Holes
- [] Finish
- [] Fit/Function
- [] Folio/Program
- [] Grain
- [] Hardware
- [] Inspection Incomplete/Unqualified
- [] Instructions Incomplete/Unclear
- [] Misaligned/off center
- [] Mislabeled
- [] Misread
- [] Off-set
- [] Out of Calibration
- [] Out of Sequence
- [] Outside Dimensions
- [] Over/Under tolerance
- [] Part Incorrect
- [] Part Lost/Missing
- [] Part Moved
- [] Positioned Wrong
- [] Power Loss/Surge
- [] Pressure/Forced
- [] Set-up
- [] Temperature/Cure
- [] Weld
- [] Wrong Stock Pulled
- [] Other

Item ID: D2423 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Lug Extrusion
Start Date: 4/3/2014 **Start Qty:** 320.00 *320* **Cust Item ID:**
Required Date: 5/2/2014 **Req'd Qty:** 320.00 *320* **Customer:**
Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** *NR1*
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC6- Inspect dimensions to drawing	0.00 DAS 27 9-89							
120 QC Quality Control	**Memo**	0.00 4/5/14							
130	Identify as per dwg & Stock Location:_____	0.00							
130 Packaging Packaging	**Memo** MAC ship	0.00				4/10/14	376		
140	QC21- Final Inspection - Work Order Release	0.00							
140 QC Quality Control	**Memo**	0.00				MCJ	4-05-15		

4-5-14

Picklist Print

Thursday, April 03, 2014 7:51:03 AM

Work Order ID: 115529 *115529*

Parent Item: D2423 *D2423*

Parent Item Name: Lug Extrusion

Start Date: 4/3/2014 **Required Date:** 5/2/2014

Start Qty: 320.00 **Required Qty:** 320.00

Comments: IPP G04.09.02Part Number D2423-108 changed to D2423KJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2423P		Purchased	No			100	f	0.0000	1	320 336			
D2423P Lug Extrusion									**				

4/9/14 376

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

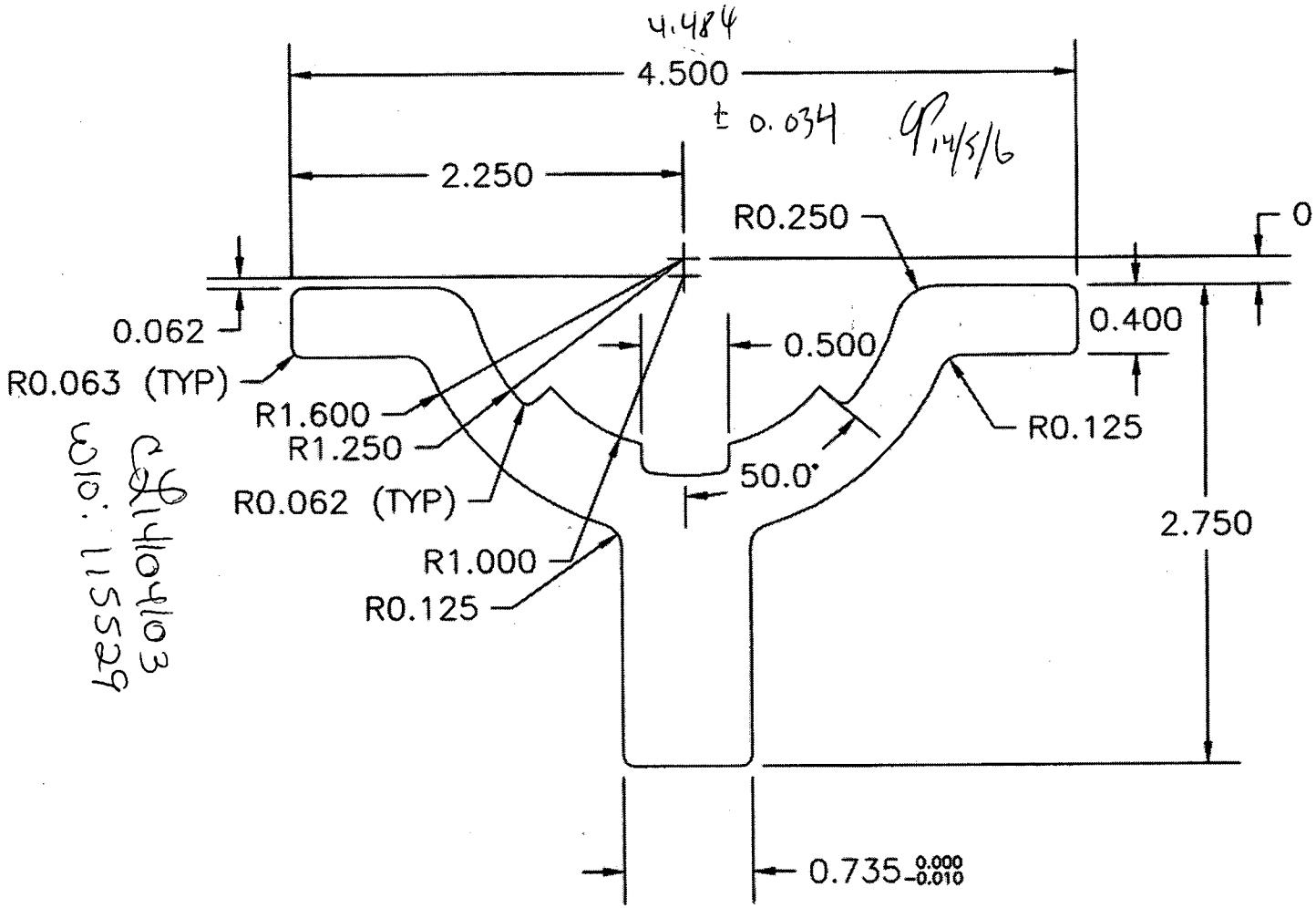
Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

RELEASED 98/08/06 KE



1. MATERIAL: 6061-T6 ALUMINUM (QQ-A-200/8)
2. NOTE: ALL DIMENSIONS ARE IN INCHES
3. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
4. MANUFACTURED USING CARADON INDALEX DIE # MS-18866
5. PART NUMBER IS D2423-XXX WHERE XXX IS CUT LENGTH IN INCHES (EG. D2423-108 IS 108" LONG)

B1	01.04.17	ADDED NOTES 4 & 5
B	98.08.04	6061-T6 WAS 6005A.T5
A	95.05.09	NEW ISSUE

DART

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DESIGN	DRAWN BY	DRAWING NO.	REV. B
CHECKED	APPROVED	D2423	SHEET 1 OF 1
DATE		TITLE	SCALE
98.08.04		LUG EXTRUSION	1:1

Copyright 1995 by DART AEROSPACE LTD

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO23637

Purchase Order Date 4/3/2014
PO Print Date 4/4/2014

Order From : VC-BON001

SIGNATURE ALUMINUM CANADA INC.
C/O/ T10322C
P.O. BOX 4488, STN A
TORONTO, ON M5W 4H1
CA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

REVISED

Contact Name
Vendor Phone 905-427-6550

Ship To Contact
Ship To Phone
Ship Via: Yours ppd
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB Destination-Collect

Line Nbr	Reference / Vendor Part Number / Line Comments / Delivery Comments	Description/ Mfg ID	Req Date/ Taxable / Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D2423P	Lug Extrusion	5/5/2014 Yes 5/5/2014		336.00 f Rec 376	$11.89	$3,996.71
	AS PER DWG D2423 REV.B B115529 EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE OUTSIDE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH ANF FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES,NICKS,OR DENTS					**Line Total:**	**$3,996.71**
2	71401-45	PROCUREMENT QUALITY CLAUSES	5/5/2014 No 5/5/2014		1.00	$0.00	$0.00
	Procurement Quality Clauses A005 right of entry A012 chemical and physical test report A016 personnel qualification A017 raw material identification (as applicable) A026 certification of material conformance A041 quality management system A042 dart notification by supplier A043 retention of quality documents						

Note:

signature aluminum CANADA INC

1850 Clements Road, Pickering Ontario, Canada L1W 3R8
Phone: (866) 587-5780 Fax: (905) 427-2207
Visit us at www.signaturealum.com

PACKING LIST

ACCT# 46024

INVOICING AND COMPANY LOCATION

SIGNATURE ALUMINUM CANADA
1850 CLEMENTS ROAD
PICKERING ON L1W 3R8

PACKING LIST DATE / DATE DU BODEREAU	PACKING LIST NUMBER / N' DE BODEREAU	SALES ORDER NUMBER / N' DE COM
05-05-14	014934	113747

REFER TO THESE NUMBERS ON ALL CORRESPONDANCE

REFEREZ-VOUS A CES NUMEROUS POUR TOUTE CORRESPONDANCE

SHIP TO / EXPÉDIÉ À

DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
CANADA

PHONE: 613-632-5200

SOLD TO / VENDUE À

DART AEROSPACE LTD.
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
CANADA

PHONE: 613-632-5200

TERMS / FREIGHT	LOCATION	TRAILER NUMBER / REMORQUE Nombre	SALESMAN / VENDEUR	CREDIT REP / REP DU CRÉDIT	SALES REP / REP. DES VENTES
PP	PIC	WILRIDE	042		R. BLAIS

CUSTOMER ID / ID DU CLIENT	ORDER DATE / DE LA COM	CUSTOMER PO NUMBER / CLIENT PO Nombre	JOB / FICHIER	FIELD SALES REP / REP REGIONAL DES VENTES	CUST SERVICE REP / REP. SERVICE CLIENTELE
46024	04/03/14	PO23637		G.ATTENBOROU	D1B
		BILL OF LADING NUMBER / NO. DE CONNAISSEMENT: 014934	CARRIER / TRANSPORTEUR: WILRIDE		

ITEM NO. / NUMÉRO	ORIGINAL ORDER QUANTITY / Quantité d'ordre ORIGINAL	UNIT / UNITÉ	PREVIOUS SHIPPED QUANTITY / PRÉCÉDENT Quantité livrée	MFG. PART NUMBER / MFG. PARTIE NUMÉRO CUSTOMER PART NUMBER / NUMÉRO DE RÉFÉRENCE DU CLIENT	ALLOY & TEMPER / ALLIAGE & TEMPER LENGTH / LONGUEUR CUTTING TOLERANCE / Tolérance de coupe	FINISH DESCRIPTION / DESCRIPTION DE FINITION FABRICATION DESCRIPTION /DESCRIPTION DE FABRICATION SHIPPING TOLERANCE / EXPÉDITION TOLERANCE	NBR OF PKGS / NBR DE PKGS	GROSS LBS / LIVRES BRUT	NET QUANTITY / QUANTITÉ NETTE	UNIT / UNITÉ	QUANTITY DUE / Quantité en raison
001	1,294	LB		DAA-5-2	6061 T6		2	1,426	1,400	LB	
	587	KG		D2423P	96.0000 IN			647	635	KG	
	42	PC			Cut(+): 0.1180 Cut(-): 0.0000	Min: -10 % Max: 10 %			47	PC	
						833761 / 211646	1	1,085	1,071		36 PC
						833761 / 211688	1	342	328		11 PC

47

376 Flight

2	1,426	1,400	LB
	647	635	KG
		47	PC
TOTALS			

Transportation/Traffic damages and/or shortage claims are to be noted on the delivery copy of sellers shipping packing lists and signed and dated below by customers authorized representatives.
No return materials will be accepted for credit without permission. The articles and/or services covered by this shipping packing list were produced in accordance with the fair labor standards act of 1938 as amended. Order accepted subject to the terms and conditions stated on the reverse side.

CUSTOMER ACKNOWLEDGEMENT OF GOODS DELIVERED AND CONDITION

DATE OF DELIVERY

DRIVER

CERTIFICATE OF COMPLIANCE

SIGNATURE ALUMINUM CANADA
1850 CLEMENTS RD
PICKERING, ON L1W 3R8

Cert Date	Cert No.	Sales Order	Page
05/03/2014	5326482	113747	1
Cust PO	**B/L No**	**Lot**	**Date**
PO23637	014934	833761	05/05/14

Sold To	Ship To
46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA	46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA

Item No	Part No	Item Description	Cust Part
001	DAA-5-2	8 MILL 6061 T6	D2423P

Gross Weight	1,426 LBS		
Net Qty	1,400 LBS	47 PCS	2 PKGS

Specification	Die Desc
AMS QQA 200/8 + ASTM B221	

Mechanical Tests:

Tensile MPA / KSI	Yield MPA / KSI	% Elongation	Conductivity	HRE
315.2 / 45.7	282.8 / 41.0	17.7	N/A	93

Chemical Analysis:

SI	FE	CU	MN	MG	CR	ZN	TI	V
0.61	0.28	0.19	0.05	0.87	0.06	0.04	0.02	0.01

This Material is RoHS Compliant

This will certify that the material described herein has been inspected and tested in accordance with Signature Aluminum Canada's standard sampling and testing procedures or in accordance with the requirements of any specification forming a part of the material description to the extent indicated herein. Data of chemical compositionfor the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our order acknowledgement form. No other warranties are applicable.

S. Mazzotta
Director of Quality
Signature Aluminum Canada Inc

ISO 9001/TS16949 Registered Company

Visit us at www.signaturealum.com

DART AEROSPACE LTD

Description:	Leg extension	**Work Order:**	B15529
Inspection Drawing:	D2403	**Rev:** B	**Part Number:** D2403

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
2.250	+/- 0.005	2.252	✓		QSI-07	
2.750	+/- 0.005	2.749	✓		"	
4.500	+/- 0.030	4.487	✓		"	
0.400	+/- 0.010	0.396	✓		"	
0.735	+/- 0.005	0.733	✓		"	
0.500	+/- 0.005	0.497	✓		"	
R0.063	+/- 0.010	0.063	✓		"	
R0.125	+/- 0.010	.125	✓		"	
R0.062	+/- 0.010	0.62	✓		"	

Measured by:	Checked By:	QC inspector:	Engineering Approval (*if necessary*):
DAS 27 9-89	DAS 27 9-89	DAS 27 9-89	
Date 14/5/16	Date 14/5/16	Date 14/5/15	Date

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D2423 PO / BATCH NO.: PO 23637 / B1155525

DATE: May 6th, 2014

MATERIAL CERT REC'D: Yes THICKNESS ORDERED: _____

QUANTITY RECEIVED: _____ THICKNESS RECEIVED: _____

QUANTITY INSPECTED: _____ SHEET SIZE ORDERED: _____

QUANTITY REJECTED: _____ SHEET SIZE RECEIVED: _____

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	N	
CORRECT FINISH	Y	N	
CORROSION	Y	N	
CORRECT GRAIN DIRECTION	Y	N	
CORRECT MATERIAL	Y	N	
CORRECT THICKNESS	Y	N	
PHOTO REQUIRED	Y	N	
CORRECT MATERIAL	Y	N	AMS-QQ-A-200/8
CORRECT REF # TO LINK CERT	Y	N	PO 23637
CORRECT MATERIAL IDENTFICATION	Y	N	
CORRECT M# ON THE MATERIAL	Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	(Y)	N	Width = 4.500 ± 0.034 PER CARAIDON DIE DWG 5/5/14
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	See Attached inspection sheet.

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: _____	SIGNED OFF BY: 12 9-89
DATE:	DATE: 14/5/14

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

INSTRUCTIONS FOR INSPECTING BAR, TUBING, ROUND, & SHEET STOCK

1- VERIFY STOCK TO DART PURCHASE ORDER
2- MEASURE ALL DIMENSIONS FOR EACH PURCHASED STOCK
 a. WIDTH, THICKNESS, DIAMETER, WALL THICKNESS & LENGTH
3- VERIFY CONDITION OF MATERIAL i.e. DAMAGED, CORRODED, etc.
4- VERIFY THAT SUPPLIER HAS A NUMBER (HEAT #) ON ITS RECEIVING REPORT TO LINK TO MATERIAL CERTS
5- VERIFY MATERIAL CERTS ARE CORECT TO THE DART PO INSTRUCTIONS
6- REMOVE / CUT A PIECE OF MATERIAL FOR SAMPLE HARDNESS TESTING

INSTRUCTIONS FOR INSPECTING SKIDTUBE & STEP EXTRUSION

1- VERIFY TO DART SUPPLIED DRAWING
2- SAMPLE INSPECT MATERIAL IN BUNDLE TO ENSURE MATERIAL CAN BE RECEIVIED INTO DART
3- USING PORTABLE HARDNESS TESTER VERIFY HARDNESS OF THE MATERIAL TO THE DRAWING
4- VERIFY THAT MATERIAL CERTS MATCH TO WHATS CALLED UP ON THE DART DRAWING

AFTER MATERIAL PASSES INSPECTION

5- HAVE DART EMPLOYEES START STOCKING MATERIAL BUT REQUEST MIN **20pcs** FOR FULL INSPECTION
6- INSPECT ALL DIMS AS PER DRAWING REQUIRMENTS

INSTRUCTIONS FOR INSPECTING CROSS TUBE MATERIAL

1- VERIFY MATERIAL CERTS MATCH THE REQUIRMENTS ON THE DART DRAWINGS
2- INSPECT MIN. HALF THE BATCH OF EXTRUSION RECEIVIED INTO DART
3- INSPECT MATERIAL AS PER THE EXTRUSION REPORT
 a. WALL THICKNESS USING ULTRA-SONIC IN 4 LOCATIONS
 b. OUTSIDE DIAMETETER HIGHEST/LOWEST BOTH ENDS
 c. INSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 d. STRAIGHTNESS @ CENTER OVER 12" SPAN
 e. WALL THICKNESS USING TUBE MICROMETER HIGHEST/LOWEST BOTH ENDS
4- IDENTFY EACH TUBE IN SEQUENCE OF INSPECTING (TUBE 1, TUBE2.....) AND W/O# AND PO#
5- RECORD ALL FINDINGS ON EXTRUSION REPORT

IF ANY QUESTIONS PLEASE SEE QC CORRDINATOR BEFORE GOING FURTHER